

## **REMARKS**

The Office Action dated December 27, 2005 has been carefully reviewed. Claims 1-13 and 18-22 were previously cancelled. Claim 24 is newly added. Claims 14-17 and 23-24 are currently pending. Reconsideration of the grounds of rejection is respectfully requested in view of the amendments and remarks herein.

### **Summary of the Office Action**

The Examiner has objected to claim 23 due to informalities.

Claim 23 was rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter of which applicant regards as the invention.

Claims 14 and 15 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 2,885,360 (“Hayden”).

Claims 14, 15 and 23 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,582,638 (“Coutelle”).

Claim 16 was rejected under 35 U.S.C. § 103(a) as being obvious over Hayden.

Claim 16 was rejected under 35 U.S.C. § 103(a) as being obvious over Coutelle.

Claim 17 was rejected under 35 U.S.C. § 103(a) as being obvious over Coutelle in view of U.S. Patent No. 4,127,422 (“Guzi”).

### **Response to Office Action**

#### **A. Objection of claim 23**

Applicants appreciate the Examiner’s recommended amendment to claim 23. Applicants have amended claim 23 and request withdraw of the Examiner’s objection.

#### **B. Rejection of Claim 23 under 35 U.S.C. § 112, second paragraph**

The Examiner has rejected claims 23 for indefiniteness as to the limitation “one or more phosphonate additives to form a clay slurry, wherein the phosphonate additive is . . .” Applicants

have amended this limitation, of claim 23, so that “phosphate additives” is in the plural form throughout this limitation. Applicants respectfully assert this amendment has resolved the alleged indefiniteness of claim 23 and request the Examiner’s withdraw of the rejection under 35 U.S.C. § 112, second paragraph.

**B. Rejection of Claims 14, 15 and 23 under 35 U.S.C. § 102(b)**

In response to the Examiner’s rejection of claims 14 and 15, the Applicants state that both Hayden and Coutelle fail to disclose each and every limitation of claims 14 and 15, as amended. Applicants further state that Coutelle fails to disclose each and every element of claim 23 as amended. “A claim is anticipated only if each and every element as set forth in the claims is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

**1. The Examiner has failed to show that Hayden discloses each and every claim limitation of amended claim 14.**

Claim 14, as amended provides for a method of making a smectite clay slurry comprising: dispersing one or more naturally occurring smectite clays, one or more phosphonate additives with water to form a clay slurry; and shearing the clay slurry. Applicants respectfully assert that Hayden does not disclose the underlined limitation of the above paragraph.

Firstly, the Examiner has cited passages from Hayden at Col. 1, lines 59-61, Col. 2, lines 24-60 and Col. 3, lines 38-39 as disclosing all the claimed features of claim 14. Col. 1, lines 55-61 state:

We have discovered that certain naturally-occurring clay having a free moisture content, defined below, of not less than 5%, and preferably between 10 and 30%, may readily be dispersed in organic liquids to impart thereto body or increased viscosity characteristics by subjecting a mixture of the clay, an organic liquid, and a dispersing agent to agitation or shear while simultaneously vaporizing a portion of the free moisture of this clay. (emphasis added)

Col. 3, lines 36-43 further state:

It is essential to the operation of this process, however, that in any event the free moisture content of the clay be adjusted by the addition or elimination of water to a value of not less than 5%. By “free moisture content” of the clay be adjusted

by the addition or elimination of water to a value of not less than 5%. By “free moisture content” of the clay, as used herein, is meant the weight of moisture removed from the clay upon drying a sample thereof to constant weight of a temperature of 220°F, expressed as the weight percent of such sample. (emphasis added)

Applicants submit this passage of Hayden describes adjusting the free moisture content of a clay. One of skill in the art will understand that the “free moisture” content, as described by Hayden, measures the amount of water chemically and/or physically absorbed by the clay. By adjusting the “free moisture” content of the clay, the amount of physically and/or chemically absorbed water is changed and the clay retains its solid form. In contrast, when a clay is dispersed into water, at 2-25 wt.% clay as stated in the specification of the present application, a thin watery suspension is obtained. The Applicants assert that adjusting the “free moisture” content of a clay is not the same as dispersing a clay into water.

Secondly, the Examiner also considers Col. 5, lines 47-63 as an example. This section of Hayden describes the preparation of the clay used in the Examples of Hayden. The preparation includes the steps of: dispersing a clay into water, Col. 5, lines 49-51; settle and centrifuge the slurry to remove impurities, Col. 5, lines 51-57; dry the slurry at 220°F to a free moisture content of at least 5% and preferably from 10 to 30%, to form the clay starting material used in examples I-XXI, Col. 5, lines 60-63. Applicants state the slurry described in Col. 5, lines 47-63 does not contain a dispersant as required by the present invention.

With further reference to Col. 5, lines 47-63, Applicants respectfully state the combination of Col. 5, lines 47-63 with Examples I-XXI does not describe the preparation of a clay/dispersant/water slurry. Firstly, one of skill in the art will understand that the clay, used in Examples I-XXI, having a free moisture of at least 5% and preferably from 10 to 30% exists in the solid form. Applicants assert that Col. 5, lines 47-63 demonstrates that the clay starting material, used in Examples I-XXI is not a clay dispersed in water but is a solid clay. Additionally in Examples I-XXI, the clay starting material is mixed with an organic liquid and dispersant. This is not the same as dispersing a clay and dispersant into water to form a slurry.

**2. Dependent Claims 15-17 and 24-25**

Dependent claims 15-17 and 24-25 depends directly on independent claim 14. Therefore, for the reasons noted above discussing Hayden, claims 15-17 and 24-25 are allowable because they depend from an allowable base claim.

**3. The Examiner has failed to show that Coutelle discloses each and every claim limitations of amended claims 14 and 23.**

The Examiner has rejected independent claims 14 and 23 under 35 U.S. C. § 102(b) based on Coutelle.

Claim 14, as amended, provides for a method of making a smectite clay slurry comprising: dispersing one or more naturally occurring smectite clays, one or more phosphonate additives and water to form a clay slurry; and shearing the clay slurry.

Claim 23, as amended provides for in part a method for making a smectite clay slurry comprising: treating a mixture of more or more naturally occurring smectite clays, one or more phosphonate additives and water to form a clay slurry. Applicants respectfully assert that Coutelle fails to disclose the underlined elements of the above paragraphs.

Coutelle is directed to a thickening agent based on at least on synthetic phyllosilicate. Col. 2, lines 66-67. Applicants respectfully assert that a synthetic phyllosilicate thickens water by a different mechanism than a naturally occurring smectite clay. Applicants state that it is well known in the art that naturally occurring smectite clays do not disperse in water in the same manner as synthetic smectite clay. Therefore, Coutelle fails to disclose each and every element of independent claims 14 and 23 and therefore claims 14 and 23 are patentable.

**4. Dependent Claims 15-17 and 24-26**

Dependent claims 15-17 and 24-26 depends directly on independent claim 14. Therefore, for the reasons noted above discussing Coutelle, claims 15-17 and 24-26 are allowable because they depend from an allowable base claim.

**C. Rejection of Claims 16 and 17 under 35 U.S.C. § 103(a)**

In response to the Examiner's rejection of claims 16 and 17, the Applicant respectfully asserts that the pending claims are allowable over the cited references because the Examiner has failed to establish a *prima facie* case of obviousness. The MPEP states, in relevant part:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. MPEP § 2142.

For the reasons discussed above, neither Hayden nor Coutelle disclose each and every element of claims 16 and 17. Therefore, the Examiner has failed to establish a *prima facie* case of obviousness, with respect to both Hayden and Coutelle, and claims 16 and 17 are patentable.

## CONCLUSION

In view of the foregoing remarks, it is submitted that pending claims 14-17 and 23-25 are in condition for allowance. Accordingly, reconsideration and timely allowance of claims 14-17 and 23-25 are requested.

Applicant respectfully requests reconsideration and withdrawal of the rejections based on 35 U.S.C. § 112, second paragraph, 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) presented in the Office Action mailed December 27, 2005. The Examiner is invited to contact the undersigned at 215-963-4764 to discuss any matter concerning this Application.

The Commissioner is hereby authorized by this paper to charge any fees due in connection with the filing of the response to Deposit Account No. **50-0310**.

Respectfully submitted,

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Date

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